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**Effect of Cocarcinogens and Tumor Promoters on DNA Repair in Mammalian Cells Susceptible to Chemical Transformation.**

The influence of various cocarcinogens and tumor promoters on the repair of ultraviolet light or chemically-induced damage to the DNA of mouse embryo cells in culture will be studied.

Primary and secondary cultures of mouse embryo cells will be exposed to agents known to damage DNA, and the incorporation of radioactive DNA precursors into macromolecular DNA in the presence of the test compounds will be measured under conditions where normal, replicative DNA synthesis is suppressed. Materials to be tested for their effects on DNA repair will include tobacco smoke fractions and pure chemicals known to be present in tobacco smoke.

Activation Date: June 1, 1974

Current Grant Level: \$34,645.

1005075435